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PTO/SB/21 (02-04)

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### TRANSMITTAL FORM

(to be used for all correspondence after initial filing)

Application Number	10/801,342		
	Filing Date	3/15/2004	
	First Named Inventor	HWANG, Hyung Jin	
	Art Unit	1637	
	Examiner Name	N/A	
Total Number of Pages in This Submission	15	Attorney Docket Number	12090-03USA

### ENCLOSURES (Check all that apply)

<input type="checkbox"/> Fee Transmittal Form	<input type="checkbox"/> Drawing(s)	<input type="checkbox"/> After Allowance communication to Technology Center (TC)
<input type="checkbox"/> Fee Attached	<input type="checkbox"/> Licensing-related Papers	<input type="checkbox"/> Appeal Communication to Board of Appeals and Interferences
<input type="checkbox"/> Amendment/Reply	<input type="checkbox"/> Petition	<input type="checkbox"/> Appeal Communication to TC (Appeal Notice, Brief, Reply Brief)
<input type="checkbox"/> After Final	<input type="checkbox"/> Petition to Convert to a Provisional Application	<input type="checkbox"/> Proprietary Information
<input type="checkbox"/> Affidavits/declaration(s)	<input type="checkbox"/> Power of Attorney, Revocation	<input type="checkbox"/> Status Letter
<input type="checkbox"/> Extension of Time Request	<input type="checkbox"/> Change of Correspondence Address	<input checked="" type="checkbox"/> Other Enclosure(s) (please identify below):
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<input checked="" type="checkbox"/> Information Disclosure Statement	<input type="checkbox"/> Request for Refund	
<input type="checkbox"/> Certified Copy of Priority Document(s)	<input type="checkbox"/> CD, Number of CD(s) _____	
<input type="checkbox"/> Response to Missing Parts/Incomplete Application	<b>Remarks</b>	
<input type="checkbox"/> Response to Missing Parts under 37 CFR 1.52 or 1.53	Enclosures: PTO/SB/08A, PTO/SB/08B and copies of the cited references A1-A3, B1-B2, C1-C5; copies of Supplementary European Search Report and Office Action from counterpart European Application; and Return Receipt Postcard.	
	Total Number of Pages in Submission does not include references.	

### SIGNATURE OF APPLICANT, ATTORNEY, OR AGENT

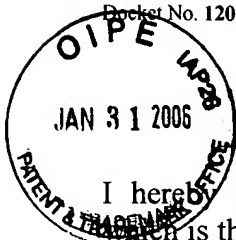
Firm or Individual name	Joseph Hyosuk Kim, Ph.D. Reg. No. 41,425 JHK Law
Signature	<i>Joseph Hyosuk Kim</i> , Reg. No. 56,814
Date	January 26, 2006

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Typed or printed name		Harry Sung Lee	
Signature	<i>Harry Sung Lee</i>	Date	January 26, 2006

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PATENT

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A handwritten signature in cursive script, appearing to read "Harry Lee".

Harry Lee

Applicant: **HWANG, Hyun Jin**

Serial No.: **10/801,342**

Filed: **March 15, 2004**

Confirmation No.: **2316**

Title: **METHOD AND APPARATUS FOR AMPLIFICATION OF NUCLEIC ACID SEQUENCES BY USING THERMAL CONVECTION**

Examiner: **N/A**

Art Unit: **1637**

Attorney Docket No.: **12090-03USA**

**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**

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Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

**INFORMATION DISCLOSURE STATEMENT**

Sir:

In accordance with 37 C.F.R. § 1.56, the references listed below and on the attached forms PTO/SB/08A and PTO/SB/08B (substitutes for form 1449/PTO) are being brought to the attention of the Examiner for consideration in connection with the examination of the above-identified patent application. The filing of this Information Disclosure Statement shall not be construed as a representation that a search has been made (37 C.F.R. § 1.97(g)), as an admission that the information cited is, or is considered to be, material to patentability, or that no other material information exists. The filing of this Information Disclosure Statement shall not be construed as an admission against interest in any manner. Copies of the cited documents are enclosed.

Patent Documents:

5,270,183 A, December 14, 1993
6,586,233 B2, July 1, 2003
2005/0074782 A1, April 7, 2005
WO 97/48818 A1, THE BOARD OF TRUSTEES OF THE LELAND STANFORD JUNIOR UNIVERSITY, December 24, 1997
WO 02/072267 A1, THE REGENTS OF THE UNIVERSITY OF CALIFORNIA, September 19, 2002

Non-Patent Documents:

KRISHNAN, M., et al., "PCR in a Rayleigh-Benard Convection Cell," Science, 298:793, 2002
BRAUN, D., et al., "Exponential DNA Replication by Laminar Convection," Physical Review Letters, 91(15):158103-1-158103-4, 2003
BRAUN, DIETER, "PCR by Thermal Convection," Modern Physics Letters B, 18(16):775-784, 2004
WHEELER, E.K., et al., "Convectively Driven Polymerase Chain Reaction Thermal Cycler," Analytical Chemistry, 76(14):4011-4016, 2004
HENNIG, M., and BRAUN, D., "Conective polymerase chain reaction around micro immersion heater," Applied Physics Letters, 87:183901-1-183901-3, 2005

It is respectfully requested that the Examiner indicate consideration of the cited references by returning copies of the attached forms PTO/SB/08A and PTO/SB/08B (substitutes for form 1449/PTO) with initials or other appropriate marks, and that the references be made of record as cited references in the application.

Also submitted herewith are copies of Supplemental European Search Report and Office Action concerning counterpart European application No. 02 765 654.5 citing some of the references listed above.

This Information Disclosure Statement is being filed before the mailing date of a First Office Action on the merits in the above-identified case. Therefore, no fee is required.

The Commissioner is authorized to charge JHK Law's Deposit Account No. **502486** for any fees required under 37 CFR §§ 1.16 and 1.17 and to credit any overpayment to said Deposit Account No. **502486**.

Respectfully submitted,

Ha-lee, Reg. No. 56,814

January 26, 2006

Date

Joseph Hyosuk Kim, Ph.D.

Reg. No. 41,425

Attorney for Applicants

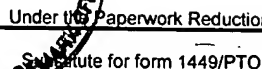
**JHK Law**

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Application Number	10/801,342
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Art Unit	1637
Examiner Name	N/A
Attorney Docket Number	12090-03USA

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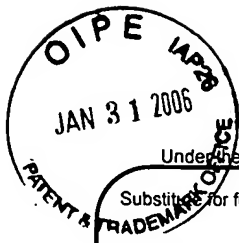
FOREIGN PATENT DOCUMENTS						
Examiner Initials*	Cite No. <sup>1</sup>	Foreign Patent Document	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages Or Relevant Figures Appear	T <sup>6</sup>
		Country Code <sup>3</sup> *Number <sup>4</sup> *Kind Code <sup>5</sup> (if known)				
	B1	WO 97/48818 A1	12-24-1997	Board of Trustees of the Leland Stanford Junior University	whole document	
	B2	WO 02/072267 A1	09-12-2002	Regents of the University of California	whole document	

Date  
Considered

**EXAMINER:** Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant. <sup>1</sup> Applicant's unique citation designation number (optional). <sup>2</sup> See Kinds Codes of USPTO Patent Documents at [www.uspto.gov](http://www.uspto.gov) or MPEP 901.04. <sup>3</sup> Enter Office that issued the document, by the two-letter code (WIPO Standard ST.3). <sup>4</sup> For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. <sup>5</sup> Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST.16 if possible. <sup>6</sup> Applicant is to place a check mark here if English language Translation is attached.

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Substitute for form 1449/PTO

**INFORMATION DISCLOSURE  
STATEMENT BY APPLICANT**

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**Complete if Known**

Application Number	10/801,342
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First Named Inventor	HWANG, Hyun Jin
Art Unit	1637
Examiner Name	N/A
Attorney Docket Number	12090-03USA

Sheet	1	of	1
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**NON PATENT LITERATURE DOCUMENTS**

Examiner Initials*	Cite No. <sup>1</sup>	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.	T <sup>2</sup>
	C1	KRISHNAN, M., et al., "PCR in a Rayleigh-Benard Convection Cell," Science, 298:793, 2002	
	C2	BRAUN, D., et al., "Exponential DNA Replication by Laminar Convection," Physical Review Letters, 91(15):158103-1-158103-4, 2003	
	C3	BRAUN, DIETER, "PCR by Thermal Convection," Modern Physics Letters B, 18(16):775-784, 2004	
	C4	WHEELER, E.K., et al., "Convectively Driven Polymerase Chain Reaction Thermal Cycler," Analytical Chemistry, 76(14):4011-4016, 2004	
	C5	HENNIG, M., and BRAUN, D., "Conective polymerase chain reaction around micro immersion heater," Applied Physics Letters, 87:183901-1-183901-3, 2005	

Examiner Signature	Date Considered
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\*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

<sup>1</sup> Applicant's unique citation designation number (optional). <sup>2</sup> Applicant is to place a check mark here if English language Translation is attached. This collection of information is required by 37 CFR 1.98. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 2 hours to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

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